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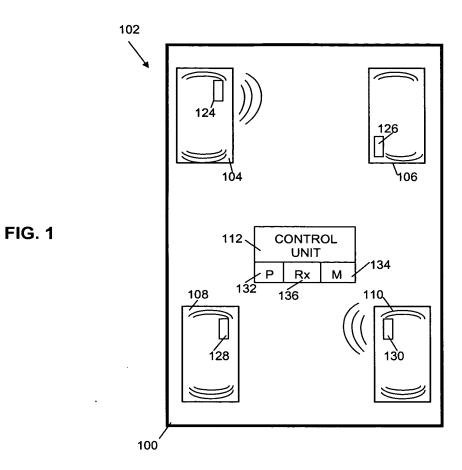
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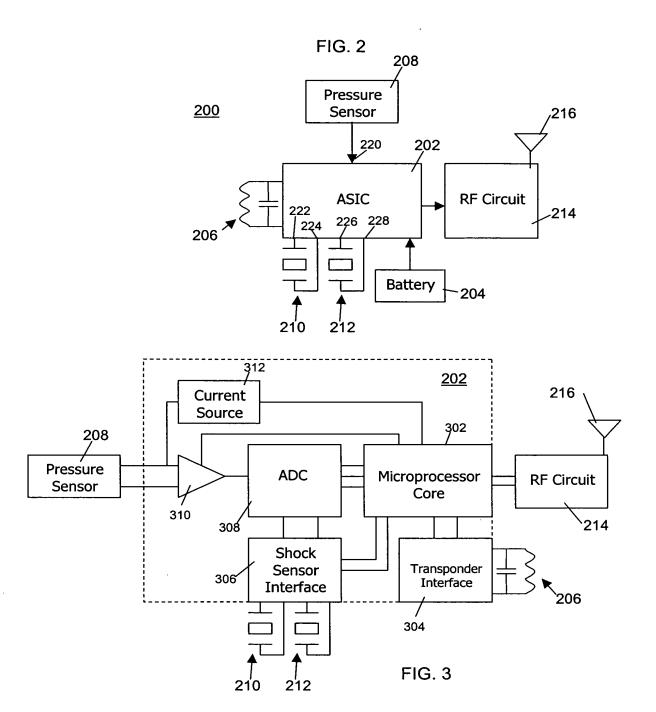
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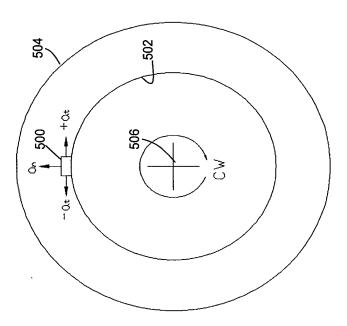


Patent Application for: MOTION DETECTION USING A SHOCK SENSOR IN A REMOTE TIRE PRESSURE MONITORING SYSTEM Inventors: Alan Kenneth McCall, et al. 3 of 27 Docket No.: 1981/689 Inventors: Alan Kenneth McCall, et al. To Processor (ADC) or comparator Voltage Amplifier Gain ≘ 7 Low Pass Filter Cut-off ≅ 120 Hz 306 High Pass Filter Cut-off ≅ 2Hz

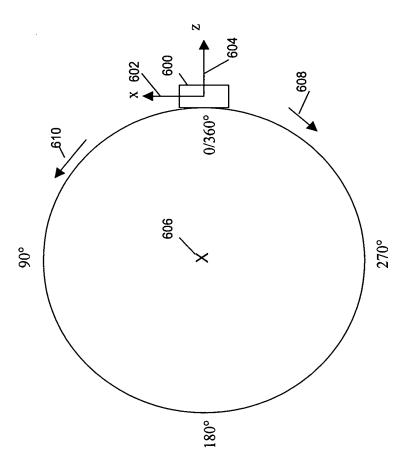
Voltage Amplifier Gain ≅ 500

Shock Sensor

Patent Application for: MOTION DETECTION USING A SHOCK SENSOR IN A REMOTE TIRE PRESSURE MONITORING SYSTEM nventors: Alan Kenneth McCall, et al. 4 of 27 Docket No.: 1981/689



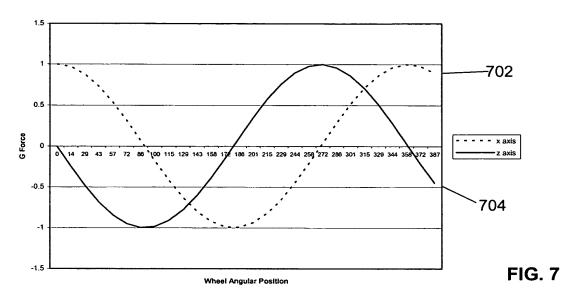




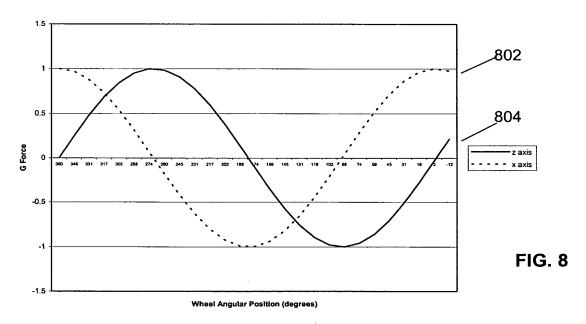
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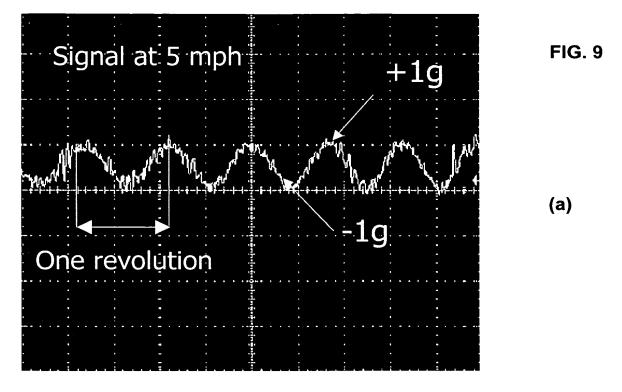
Docket No.: 1981/689

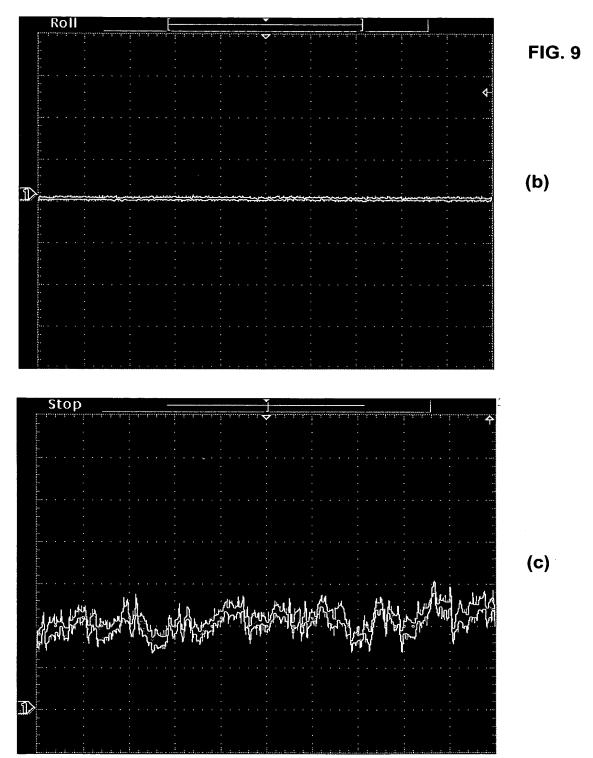
G Force vs Wh el Angular Position (CCW)



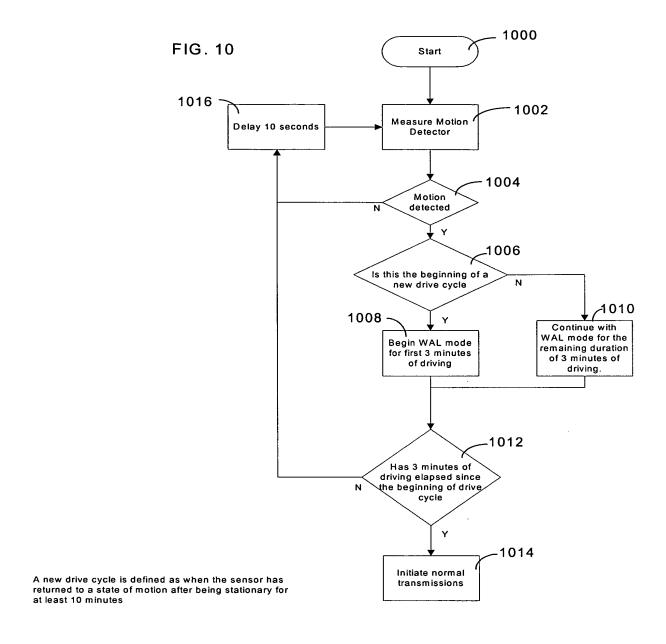
G Force vs Wheel Angular Position (CW)

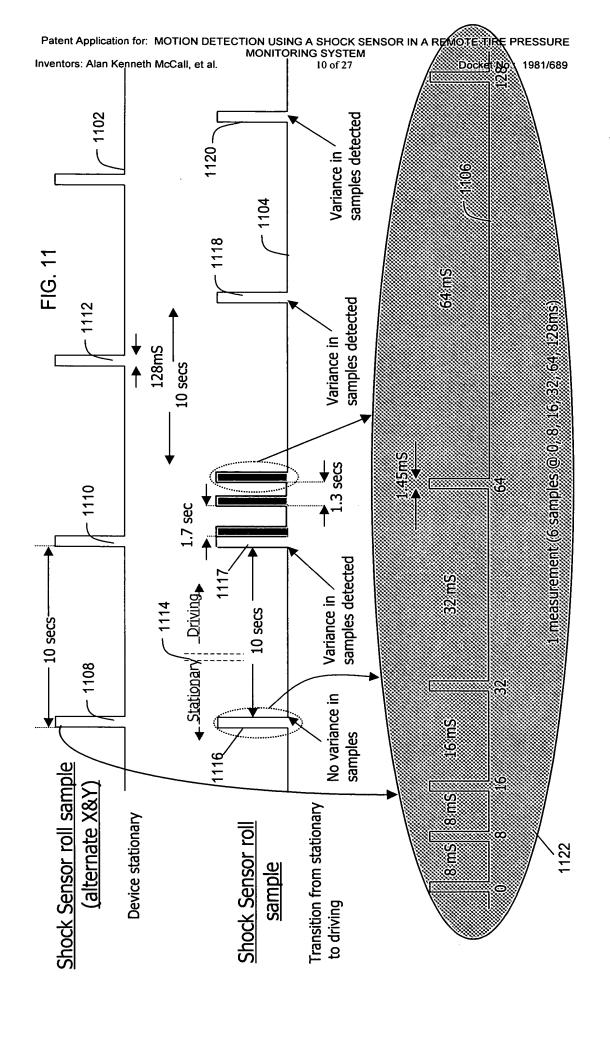






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End

Sample variance in

sample

STAGE 1 Sample Frequency

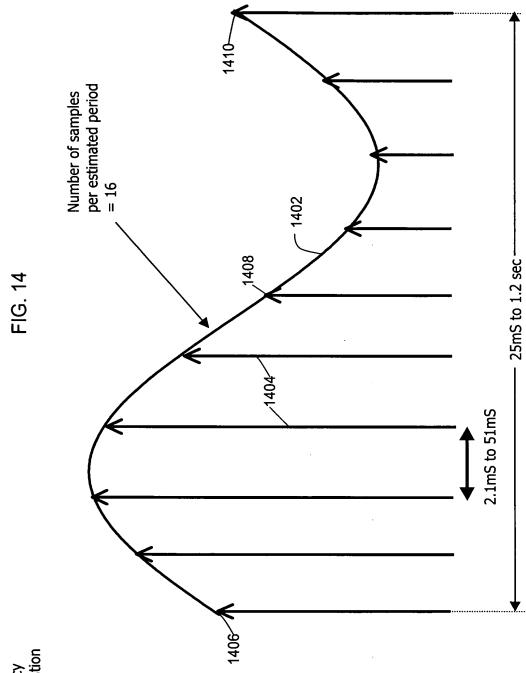
Determination

Sample Frequency

STAGE 2

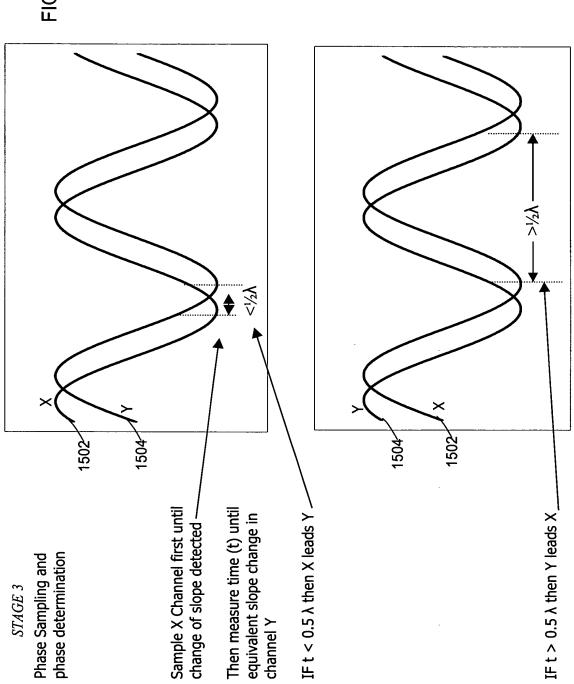
Confirmation

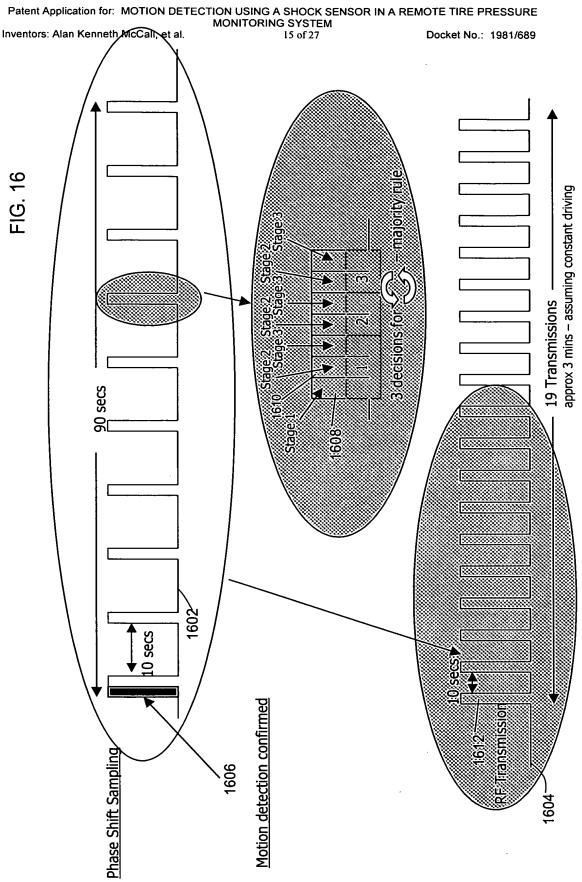
STAGE 3 Quadrature Sampling



STAGE 2 Frequency Confirmation

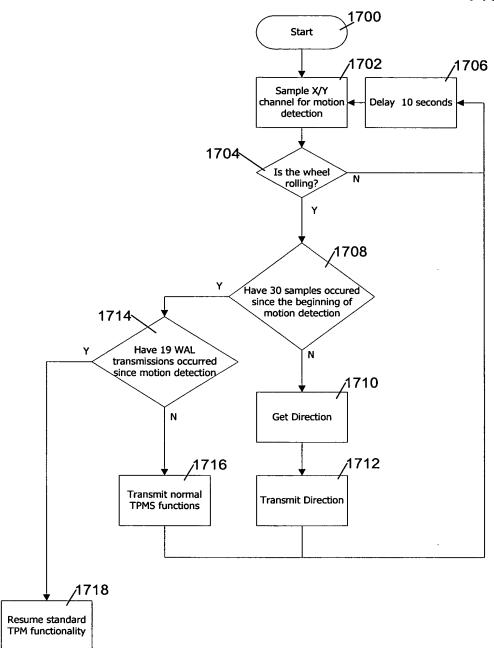


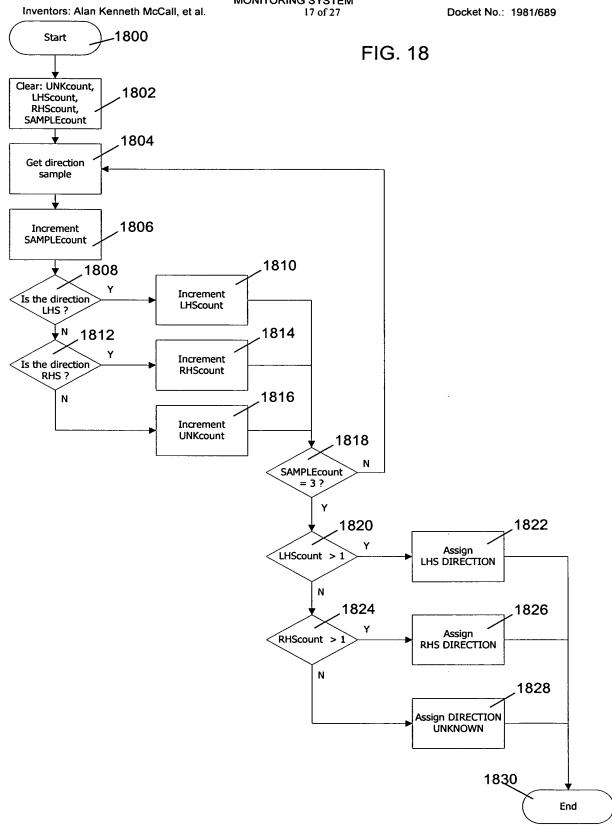




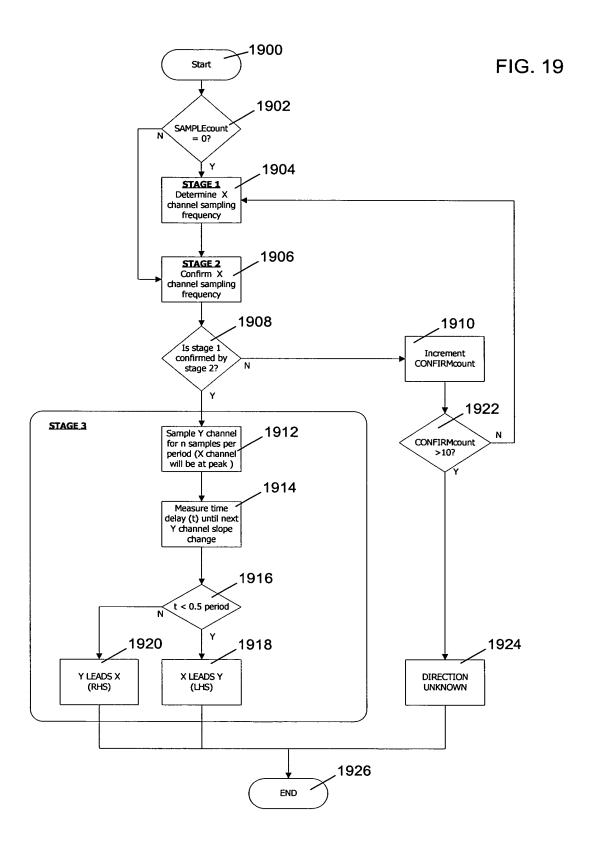
Inventors: Alan Kenneth McCall, et al. 16 of 27 Docket No.: 1981/689

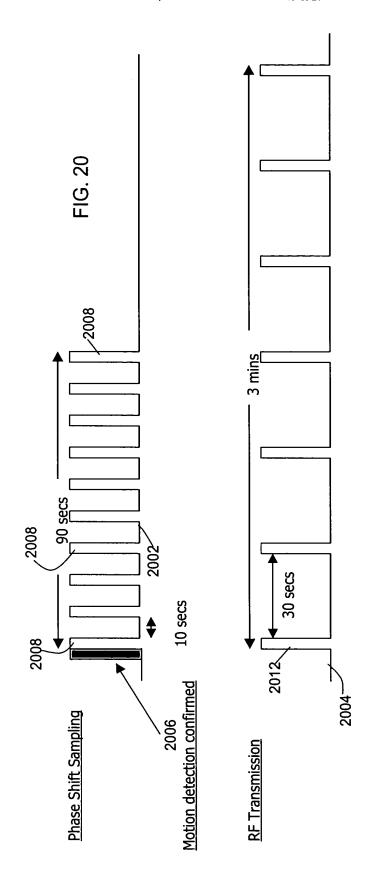
FIG. 17



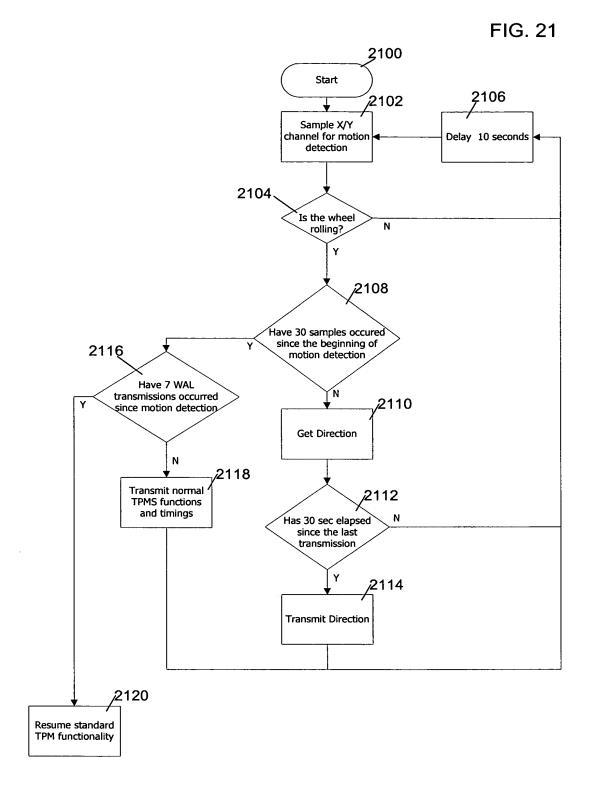


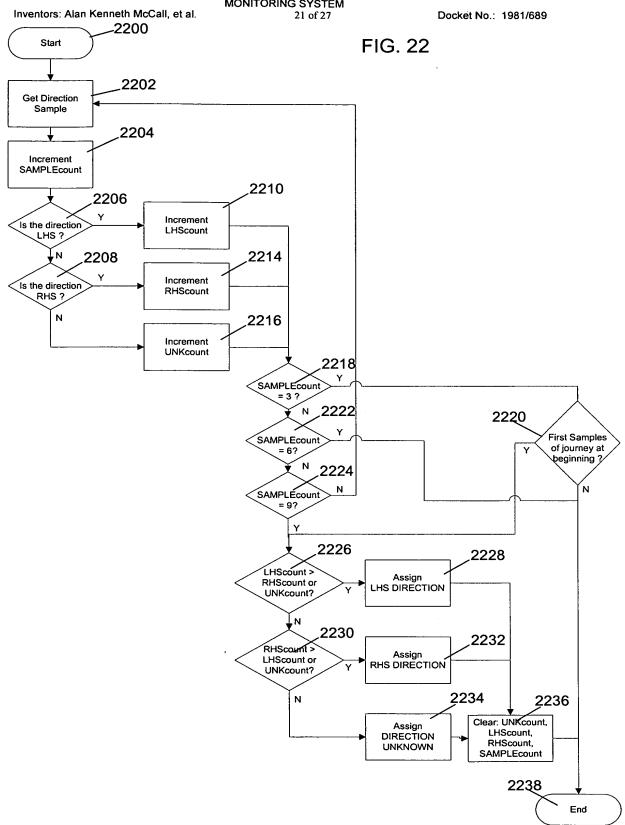
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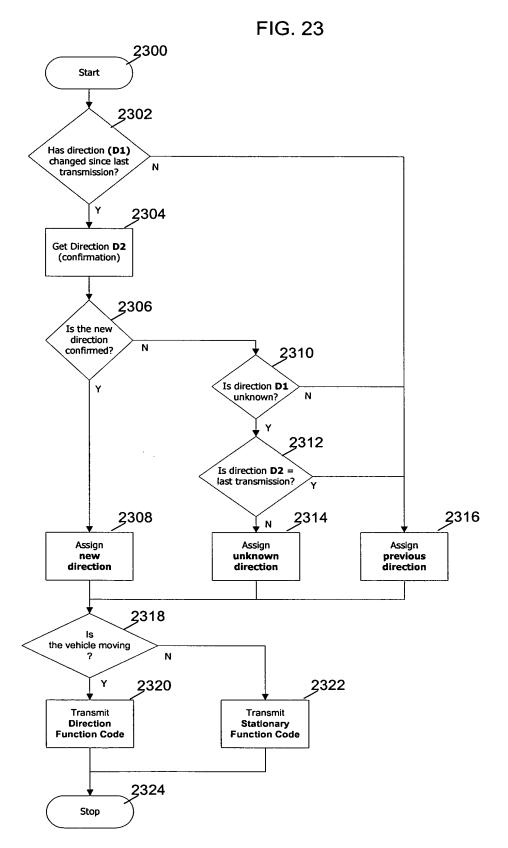
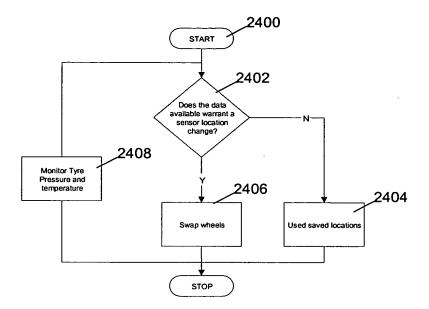
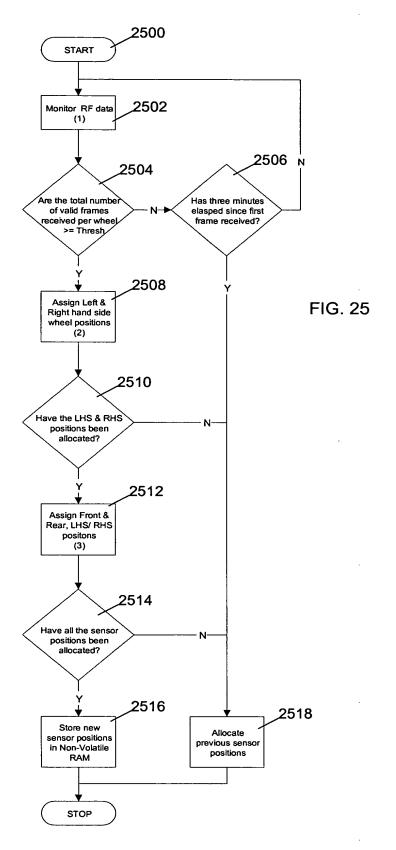
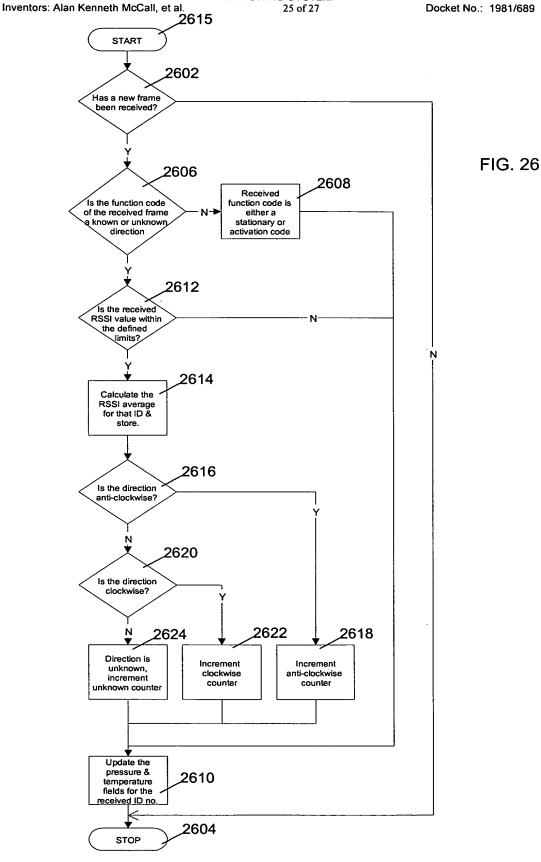


FIG. 24



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